

chain nodes:

7 9 10 13 14 15

ring nodes:

1 2 3 4 5 6

chain bonds:

7-9 9-10 10-13 13-14 13-15

ring bonds:

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

7-9 9-10 10-13 13-14 13-15

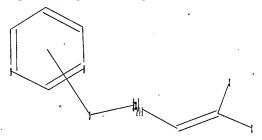
normalized bonds:

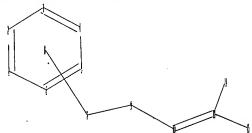
1-2 1-6 2-3 3-4 4-5 5-6

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS8:Atom 9:CLASS10:CLASS13:CLASS14:CLASS15:CLASS

Uploading C:\Program Files\Stnexp\Queries\10524438.str





chain nodes :

7 9 10 13 14 15

ring nodes :

1 2 3 4 5 6

chain bonds :

7-9 9-10 10-13 13-14 13-15

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

7-9 9-10 10-13 13-14 13-15

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:CLASS 10:CLASS

13:CLASS 14:CLASS 15:CLASS

L1

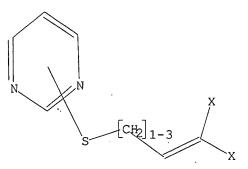
STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1

STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 sss sam SAMPLE SEARCH INITIATED 22:58:22 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -21 TO ITERATE 10/524,438

100.0% PROCESSED 21 ITERATIONS

7 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: · 146 TO 694

PROJECTED ANSWERS:

7 TO 298

7 SEA SSS SAM L1

=> => s ll sss ful

FULL SEARCH INITIATED 22:59:19 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 492 TO ITERATE

100.0% PROCESSED 492 ITERATIONS SEARCH TIME: 00.00.01

196 ANSWERS

196 SEA SSS FUL L1

=> => s 13

14 L3

=> d 14 1-14 bib, ab, hitstr

```
ANSWER 1 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
L4
AN
     2006:189309 CAPLUS
DN
     146:228671
     Product class 1: 1,1-bis(heteroatom-functionalized) allenes: product
ΤI
     subclass 1: 1,1-dihaloa/lenes
Kostikov, R. R.
ΑU
CS
     Germany
     Science of Synthesis (2006),
                                   Volume Date 2005; 24, 17-35
SO
     CODEN: SSCYJ9
PB
     Georg Thieme Verlag
     Journal; General Review
DT
LA
     English
     A review of methods to prepare 1,1-dihaloallenes and applications to organic
AΒ
     synthesis.
ΙT
     161064-32-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (review of preparation of dihaloallenes and application to organic
synthesis)
     161064-32-0 CAPLUS
RN
     Pyrimidine, 2-[(3,3-difluoro-2-propen-1-yl)thio]- (CA INDEX NAME)
CN
```

$$N = CH_2 - CH = CF_2$$

$$N$$

RE.CNT 86 THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/524,438

L4ANSWER 2 OF 14 CAPLUS. COPYRIGHT 2007 ACS on STN AN 2006:119356 CAPLUS 144:212791 DN Preparation of haloalkenes and their use as pesticides TIIN Fujii, Katsutoshi; Nakamoto, Yasushi; Hatano, Koji; Kanetsuki, Yu PA Ube Industries, Ltd., Japan SO Jpn. Kokai Tokkyo Koho, 29 pp. CODEN: JKXXAF DT Patent LA Japanese FAN.CNT 1 PATENT NO. KIND DATE DATE APPLICATION NO. PΙ JP 2006036706 Α 20060209 JP 2004-220527 20040728 PRAI JP 2004-220527 20040728 MARPAT 144:212791 OS AB QA(CH2CH2)nCX:CF2 [I: Q = Q1 - Q3, $\sqrt{\text{etc.}}$; R1 = lower alkyl; R2 = H, halo, lower haloalkyl(oxy), lower alkylsulfonyl; R3 = H, lower haloalkyl, halo; R4 = H, halo; R5 = H, halo, lower alkyl; m = 0-2; X = H, F; A = 0, S, S0, S02; n = 1, 2] are prepared Thus, condensation of 2-tert-butyl-4-chloro-5mercapto-3-(2H)-pyridazinone with 6,6-difluoro-5-hexenyl methanesulfonate gave I (Q = Q1, R1 = Me3C, A = S, X = H, n = 2), which showed 100% acaricidal and 60-80% insecticidal activities. 875583-78-1P ΙT RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of haloalkenyl-modified heterocycles as insecticides, nematocides, and acaricides) RN 875583-78-1 CAPLUS

4-Pyrimidinamine, 5-(4-chlorophenyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-

(9CI) (CA INDEX NAME)

CN

```
ANSWER 3 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
L4
     2004:177920 CAPLUS
AN
DN
     140:235736
     Preparation of fluorobutenylthioheteroarylpyrimidines as pesticides.
ΤI
     Fischer, Ruediger; Alig, Bernd; Bretschneider, Thomas; Maurer, Fritz;
ΙN
     Erdelen, Christoph; Konze, Joerg; Loesel, Peter; Watanabe, Yukiyoshi
     Bayer CropScience A.-G., Germany
PΑ
     Ger. Offen., 55 pp.
SO
     CODEN: GWXXBX
DT
     Patent
LA
     German
FAN.CNT 1
                                           DATE

DE 2002-10238725 Process

CA 2003-240000
                                 DATE ·
     PATENT NO.
                          KIND
                         ____
                                 _____
     DE 10238725
                          A1
                                 20040304
PΙ
                          A1 .
     CA 2496306
                                 20040401
     WO 2004026858
                                 20040401
                                             WO 2003-EP8881
                          Α1
                                                                      20030811
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE; LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003271560
                           Α1
                                 20040408
                                             AU 2003-271560
     EP 1534701
                           A1
                                 20050601
                                             EP 2003-753355
                                                                      20030811
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                 20050621
                                              BR 2003-13751
     BR 2003013751
                           Α
                                                                      20030811
     CN 1688571
                           Α
                                 20051026
                                              CN 2003-824608
                                                                      20030811
     JP 2006508059
                           Τ
                                 20060309
                                              JP 2004-536934
                                                                      20030811
     MX 2005PA01962
                          Α
                                 20050428
                                             MX 2005-PA1962
                                                                      20050218
     ZA 2005001457
                          Α
                                 20060426
                                              ZA 2005-1457
                                                                     20050218
     NO 2005001500
                          Α
                                 20050321
                                             NO 2005-1500
                                                                     20050321
                                 20060518
                                              US 2005-524438
                                                                     20050627
     US 2006106042
                           A1
PRAI DE 2002-10238725
                           Α
                                 20020823
     WO 2003-EP8881
                           W
                                 20030811
     MARPAT 140:235736
OS
     Title compds. [I; n = 0-2; R = H, F; X, Y, Z = H, NO2, cyano, CO2H,
AB
     carbamoyl, thiocarbamoyl, OH, cyanato, thiocyanato, (substituted) alkyl,
     alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulfonyl,
     dialkylaminocarbonyl, alkenyl, alkynyl, Ph, PhO, PhS, pyridyl, furyl, thienyl, etc.], were prepared Thus, 4-chloro-2-[(4,4-difluoro-3-
     butenyl)sulfanyl]pyrimidine (preparation given), pyrazole, and Cs2CO3 were
     refluxed 30 min. in MeCN to give 75% 2-[(4,4-difluoro-3-butenyl)sulfanyl]-
     4-(pyrazol-1-yl)pyrimidine. The latter at 500 ppm gave 99% kill of Myzus
     persicae on cabbage leaves.
IT
     668436-82-6
     RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL
     (Biological study); USES (Uses)
        (preparation of fluorobutenylthioheteroarylpyrimidines as pesticides)
RN
     668436-82-6 CAPLUS
     Pyrimidine, 4-[2-(1,1-dimethylethyl)-2H-tetrazol-5-yl]-2-[(3,4,4-trifluoro-
CN
     3-butenyl)thio]- (9CI) (CA INDEX NAME)
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668436-04-2P 668436-05-3P 668436-06-4P IT 668436-07-5P 668436-08-6P 668436-09-7P 668436-10-0P 668436-11-1P 668436-12-2P 668436-14-4P 668436-15-5P 668436-16-6P 668436-18-8P 668436-20-2P 668436-21-3P 668436-23-5P 668436-25-7P 668436-27-9P 668436-29-1P 668436-32-6P 668436-35-9P 668436-36-0P 668436-37-1P 668436-38-2P 668436-39-3P 668436-40-6P 668436-41-7P 668436-42-8P 668436-43-9P 668436-44-0P 668436-45-1P 668436-46-2P 668436-47-3P 668436-48-4P 668436-49-5P 668436-50-8P 668436-51-9P 668436-52-0P 668436-53-1P 668436-54-2P 668436-55-3P 668436-56-4P 668436-57-5P 668436-58-6P 668436-59-7P 668436-60-0P 668436-61-1P 668436-62-2P 668436-63-3P 668436-64-4P 668436-65-5P 668436-66-6P 668436-67-7P 668436-68-8P 668436-69-9P 668436-70-2P 668436-71-3P 668436-72-4P 668436-73-5P 668436-74-6P 668436-75-7P 668436-76-8P 668436-77-9P 668436-78-0P 668436-79-1P 668436-80-4P 668436-81-5P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of fluorobutenylthioheteroarylpyrimidines as pesticides) 668436-04-2 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(1H-pyrazol-1-yl)- (9CI) (CA INDEX NAME)

RN

RN 668436-05-3 CAPLUS
CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2-pyridinyl)- (9CI) (CAINDEX NAME)

RN 668436-06-4 CAPLUS

CN Pyrimidine, 4-(5-chloro-2-thienyl)-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-07-5 CAPLUS

CN Pyrimidine, 4-(5-chloro-2-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-08-6 CAPLUS.

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-4-(2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 668436-09-7 CAPLUS '

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-(2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 668436-10-0 CAPLUS

CN Isoquinoline, 1-[2-[(4,4-difluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

RN 668436-11-1 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-methoxy-2-pyridinyl)-(9CI) (CA INDEX NAME)

RN 668436-12-2 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(3-pyridinyl)- (9CI) (CA INDEX NAME)

RN 668436-14-4 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)

RN 668436-15-5 CAPLUS CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2-thiazolyl)- (9CI) (CA INDEX NAME)

RN 668436-16-6 CAPLUS CN Pyrimidine, 4-(2-thiazolyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-18-8 CAPLUS
CN Pyrimidine, 4-(3-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)
(CA INDEX NAME)

RN 668436-20-2 CAPLUS CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-pyrazinyl- (9CI) (CA INDEX NAME)

RN 668436-21-3 CAPLUS

CN Pyrimidine, 4-(4-methoxy-2-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-23-5 CAPLUS

CN Pyrimidine, 4-pyrazinyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-25-7 CAPLUS

CN Pyrimidine, 4-(6-bromo-2-pyridinyl)-2-[(4,4-difluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-27-9 CAPLUS

CN Pyrimidine, 4-(4-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-29-1 CAPLUS
CN Isoquinoline, 1-[2-[(3,4,4-trifluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI)
(CA INDEX NAME)

RN 668436-32-6 CAPLUS
CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(6-ethoxy-2-pyridinyl)-

 $F_2C = CH - CH_2 - CH_2 - S$ OEt

(9CI) (CA INDEX NAME)

RN 668436-35-9 CAPLUS
CN Pyrimidine, 4-(lH-pyrrol-2-yl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)
(CA INDEX NAME)

RN 668436-36-0 CAPLUS
CN Pyrimidine, 4-(1H-pyrazol-1-yl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)
(CA INDEX NAME)

RN 668436-37-1 CAPLUS

CN Pyrimidine, 4-(1-methyl-1H-pyrrol-3-yl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-38-2 CAPLUS

CN Pyrimidine, 4-(4-chloro-1H-pyrazol-1-yl)-2-[(4,4-difluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-39-3 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(1H-1,2,3-triazol-1-yl)-(9CI) (CA INDEX NAME)

$$N$$
 N
 $S-CH_2-CH_2-CH$
 CF_2

RN 668436-40-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2H-1,2,3-triazol-2-yl)-(9CI) (CA INDEX NAME)

$$N$$
 N
 $S-CH_2-CH_2-CH=CF_2$

RN 668436-41-7 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2-thienyl)- (9CI) (CA INDEX NAME)

RN 668436-42-8 CAPLUS

CN Pyrimidine, 4-(2-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-43-9 CAPLUS

CN Quinoline, 2-[2-[(4,4-difluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

$$N$$
 $S-CH_2-CH_2-CH=CF_2$

RN · 668436-44-0 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-phenyl-2-pyridinyl)-(9CI) (CA INDEX NAME)

RN 668436-45-1 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-[4-(1,1-dimethylethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)

$$t-Bu$$
 N
 $S-CH_2-CH_2-CH$
 CF_2

RN 668436-46-2 CAPLUS

CN Quinoline, 2-[2-[(3,4,4-trifluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

RN 668436-47-3 CAPLUS

CN Pyrimidine, 4-(4-phenyl-2-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-48-4 CAPLUS

CN Pyrimidine, 4-(3-methoxy-2-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-49-5 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(3-methoxy-2-pyridinyl)-(9CI) (CA INDEX NAME)

RN 668436-50-8 CAPLUS

CN Pyrimidine, 4-[4-(1,1-dimethylethyl)-2-pyridinyl]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-51-9 CAPLUS

CN 3H-Pyrazol-3-one, 1-[2-[(4,4-difluoro-3-butenyl)thio]-4-pyrimidinyl]-1,2-dihydro-4-methyl- (9CI) (CA INDEX NAME)

RN 668436-52-0 CAPLUS

CN 1H-Benzotriazole, 1-[2-[(4,4-difluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

RN 668436-53-1 CAPLUS

CN Pyrimidine, 4-(1H-pyrrol-1-yl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-54-2 CAPLUS

CN 2H-Benzotriazole, 2-[2-[(4,4-difluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

$$N$$
 N
 N
 $S-CH_2-CH_2-CH=CF_2$

RN 668436-55-3 CAPLUS

CN Pyrimidine, 4-(3-chloro-2-pyridinyl)-2-[(4,4-difluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

$$S-CH_2-CH_2-CH=CF_2$$

RN 668436-56-4 CAPLUS

CN Pyrimidine, 4-(3-chloro-2-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-57-5 CAPLUS

CN Benzothiazole, 6-chloro-2-[2-[(4,4-difluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

$$C1$$
 S
 N
 S
 CH_2
 CH_2
 CH_2
 CH_2
 CH_2

RN 668436-58-6 CAPLUS

CN Benzothiazole, 6-chloro-2-[2-[(3,4,4-trifluoro-3-butenyl)thio]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

$$S = CH_2 - CH_2 - C = F$$

RN 668436-59-7 CAPLUS

CN Pyrimidine, 4-(4-thiazolyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-60-0 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-thiazolyl)- (9CI) (CA INDEX NAME)

RN 668436-61-1 CAPLUS

CN Pyrimidine, 4-(5-methoxy-2-pyridinyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

$$\begin{array}{c} \texttt{CF2} \\ \texttt{F-C-CH}_2-\texttt{CH}_2-\texttt{S} \\ \\ \texttt{N} & \texttt{N} & \texttt{N} \end{array}$$
 OMe

RN 668436-62-2 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(5-methoxy-2-pyridinyl)-(9CI) (CA INDEX NAME)

RN 668436-63-3 CAPLUS

CN Pyrimidine, 4-(5-bromo-2-thienyl)-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-64-4 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(5-methyl-2-thienyl)- (9CI) (CA INDEX NAME)

RN- 668436-65-5 CAPLUS

CN Pyrimidine, 4-benzo[b]thien-2-yl-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-66-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(3-methylbenzo[b]thien-2-yl)- (9CI) (CA INDEX NAME)

$$S-CH_2-CH_2-CH_2$$

RN 668436-67-7 CAPLUS

CN Pyrimidine, 4-(5-bromo-2-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-68-8 CAPLUS

CN Pyrimidine, 4-(5-methyl-2-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

668436-69-9 CAPLUS

RN

CN Pyrimidine, 4-benzo[b]thien-2-yl-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 668436-70-2 CAPLUS

CN Pyrimidine, 4-(3-methylbenzo[b]thien-2-yl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & CF_2 \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 668436-71-3 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(3-thienyl)- (9CI) (CA INDEX NAME)

RN 668436-72-4 CAPLUS

CN Pyrimidine, 4-(3-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-73-5 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2,5-dimethyl-3-thienyl)-(9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S$$

$$Me$$

$$Me$$

$$Me$$

RN 668436-74-6 CAPLUS
CN Pyrimidine, 4-(2,5-dimethyl-3-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio](9CI) (CA INDEX NAME)

RN 668436-75-7 CAPLUS
CN Pyrimidine, 4-(2,5-dichloro-3-thienyl)-2-[(4,4-difluoro-3-butenyl)thio](9CI) (CA INDEX NAME)

RN 668436-76-8 CAPLUS
CN Pyrimidine, 4-(2,5-dichloro-3-thienyl)-2-[(3,4,4-trifluoro-3-butenyl)thio](9CI) (CA INDEX NAME)

RN 668436-77-9 CAPLUS

CN Pyrimidine, 5-[2-(difluoromethyl)-2H-tetrazol-5-yl]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 668436-78-0 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-(1H-pyrazol-1-yl)-(9CI) (CA INDEX NAME)

$$O = S - CH_2 - CH_2 - CH = CF_2$$

$$N \qquad N \qquad N$$

RN 668436-79-1 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-4-(1H-pyrazol-1-yl)(9CI) (CA INDEX NAME)

RN 668436-80-4 CAPLUS

CN Pyrimidine, 4-(4-chloro-1H-pyrazol-1-yl)-2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

RN 668436-81-5 CAPLUS
CN Pyrimidine, 4-(4-chloro-1H-pyrazol-1-yl)-2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

NAME)

 $O \longrightarrow_{N}^{H} S - CH_2 - CH_2 - CH = CF_2$

RN 155957-30-5 CAPLUS CN Pyrimidine, 4-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$C1$$
 N
 $S-CH_2-CH_2-CH=CF_2$

L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:428543 CAPLUS

DN 125:86634

TI Pesticidal heterocyclic and phenyl compounds

IN . Smith, Alison Mary

PA Zeneca Limited, UK

SO Brit. UK Pat. Appl., 112 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 1

OS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	GB 2293380	A	19960327	GB 1995-18703	19950913
PRAI	GB 1994-19083	Α	19940922		
	GB 1994-19085	A	19940922	•	

Me us H.

MARPAT 125:86634

AB RS(O)nCH2CH2CMe:CF2 [n = 0, 1, 2; R = (un)substituted Ph, furyl, thienyl, nitrogen heterocycle] have nematocidal, insecticidal, and acaricidal activity. Thus, MeCH:CHCO2H was treated with CF2Br2 to give BrCF3CHMeCH2CO2H which was reduced to the alc., tosylated, and treated with 2-mercaptobenzothiazole and dehydrobrominated to give the sulfide I. I gave 96% mortality of Meloidogyne incognita at 1.65 ppm. Pharmaceutical and veterinary formulations are also reported. Insecticidal and acaricidal data are not reported.

IT 178628-60-9P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of nematocidal difluoromethylbutenylthiobenzothiazoles and related compds.)

RN 178628-60-9 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-methyl-3-butenyl)thio]- (9CI) (CA INDEX NAME)

IT 178628-70-1P

RL: AGR (Agricultural use); SPN.(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of nematocidal difluoromethylbutenylthiobenzothiazoles and

(preparation of nematocidal difluoromethylbutenylthiobenzothiazoles and related compds.)

RN 178628-70-1 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-methyl-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

```
ANSWER 5 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
L4
     1995:652321 CAPLUS
AN
DN
     123:55860
     Process for the preparation of 1-(heterocyclylthio)-4,4-difluoro-3-butene-
ΤI
     derivative nematicides
     Turnbull, Michael Drysdale; Willetts, Nigel James; Fitzjohn, Steven;
TN
     Kholia, Prafula Govind; Smith, Alison Mary; Salmon, Roger; Bansal,
     Harjinder Singh; Williams, Alfred Glyn
PΑ
     Zeneca Ltd., UK
                                                                 Same as #7
SO
     PCT Int. Appl., 33 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                                                                    DATE
                                -----
                                            _____
     ______
                                19950216
                                            WO 1994-GB1570
                                                                    19940720
PΙ
     WO 9504727
                          A1
        W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KE, KG, KP, KR,
             KZ, LK, LT, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK,
             TJ, TT, UA, US, UZ, VN
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
             BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
                                19950228
                                            AU 1994-71930
                                                                    19940720
     AU 9471930
                          Α
                                             EP 1994-921059
                                                                    19940720
     EP 712395
                          A1
                                19960522
     EP 712395
                          В1
                                20020522
         R: AT, BE, CH, DE, DK, ES, FR, GB; GR, IE, IT, LI, LU, MC, NL, PT, SE
     HU 73351
                          A2
                                19960729
                                             HU 1995-3825
                                                                    19940720
     HU 218575
                          В
                                20001028
     CN 1128535
                          Α
                                19960807
                                             CN 1994-192999
                                                                    19940720
     BR 9407164
                          Α
                                19960917
                                             BR 1994-7164
                                                                    19940720
     JP 09501175
                          T
                                19970204
                                             JP 1995-506270
                                                                    19940720
                          B2
                                20031202
     JP 3472304
     AT 217869
                          Τ.
                                20020615
                                            AT 1994-921059
                                                                    19940720
     ES 2177580
                          Т3
                                20021216
                                             ES 1994-921059
                                                                    19940720
                                20000716
                                             IL 1994-110432
     IL 110432
                          Α
                                                                    19940725
                                19950328
                                             ZA 1994-5561 ·
     ZA 9405561
                          Α
                                                                    19940727
                                19980317
                                             US 1994-286142
                                                                    19940804
     US 5728833
                          Α
                                             US 1997-976559
                                                                    19971124
     US 5914423
                          Α
                                19990622
PRAI GB 1993-16219
                          A
                                19930805
                          Α
                                19930805
     GB 1993-16220
     GB 1993-25453
                          Α
                                19931213
                          Α
                                19931213
     GB 1993-25455
     WO 1994-GB1570
                          W
                                19940720
                                19940804
     US 1994-286142
                          A3
OS
     CASREACT 123:55860; MARPAT 123:55860
     The title compds. XSCH2CH2CH:CF2 [X = (un)substituted 5- or 6-membered
AB
     heterocyclyl] [e.g., 2-(4,4-difluorobut-3-enylthio)-5-methylbenzoxazole;
     oil], useful as nematicides (no data), are prepared in high yield by the
     condensation of XSH with CF2:CHCH2CH2L [L = Cl, Br, OSO2Ra; Ra = is
     4-chloroalkyl, Ph (un) substituted by 4-chloroalkyl].
     155957-00-9P 155957-01-0P 155957-04-3P
ΙT
     155957-06-5P 155957-07-6P
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (process for the preparation of 1-(heterocyclylthio)-4,4-difluoro-3-butene-
        derivative nematicides)
RN
     155957-00-9 CAPLUS
     Pyrimidine, 4-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)
CN
```

$$S-CH_2-CH_2-CH=CF_2$$

RN 155957-01-0 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{Ph} & \text{S-CH}_2\text{-CH}_2\text{-CH} \\ \hline & \text{N} \end{array}$$

RN 155957-04-3 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-fluorophenyl)- (9CI)
(CA INDEX NAME)

RN 155957-06-5 CAPLUS

CN Pyrimidine, 4-cyclopropyl-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 155957-07-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(1-methylcyclopropyl)-(9CI) (CA INDEX NAME)

$$S-CH_2-CH_2-CH=CF_2$$

10/524,438

- L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1995:321000 CAPLUS
- DN 122:132248
- TI Facile nucleophilic addition of thiols to 1,1-difluoroallene: a convenient approach to γ,γ -difluoroallyl sulfides
- AU Xu, Yuan-yao; Jin, Fu-qiang; Huang, Wei-yuan
- CS Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Lu, Shanghai, 200032, Peop. Rep. China
- SO Journal of Fluorine Chemistry (1995), 70(1), 5-6 CODEN: JFLCAR; ISSN: 0022-1139
- PB Elsevier
- DT Journal
- LA English
- OS CASREACT 122:132248
- AB In the presence of base, nucleophilic addns. of thiols RSH (R = Ph, substituted Ph, heterocyclyl) to 1,1-difluoroallene occur readily, yielding γ,γ -difluoroallyl sulfides CF2:CHCH2SR in high yield.
- IT 161064-32-0P
- RN 161064-32-0 CAPLUS
- CN Pyrimidine, 2-[(3,3-difluoro-2-propen-1-yl)thio]- (CA INDEX NAME)

$$\begin{array}{c|c}
N & S-CH_2-CH=CF_2\\
\hline
N & & \\
\end{array}$$

```
ANSWER 7 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
AN
     1994:557663 CAPLUS
DN:
     121:157663
TI
     Preparation of heterocyclic compounds as pesticides
IN
     Fitzjohn, Steven; Robinson, Michael Peter; Turnbull, Michael Drysdale
PA
     Zeneca Ltd., UK
     PCT Int. Appl., 78 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                         KIND
     PATENT NO.
                                 DATE
                                             APPLICATION NO.
                                 19940331
PΙ
     WO 9406777
                          A1
                                             WO 1993-GB1912
                                                                    19930910
         W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN,
             MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
             BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
                                             GB 1993-18737
     GB 2270688
                          Α
                                 19940323
                                                                    19930909
                                             AU 1993-49777
     AU 9349777
                          Α
                                 19940412
                                                                    19930910
     ZA 9306708
                                             ZA 1993-6708
                          Α
                                 19940519
                                                                    19930910
     CN 1098718
                                             CN 1993-119093
                          Α
                                 19950215
                                                                    19930910
     CN 1041922
                          В
                                 19990203
     EP 660827
                          A1
                                 19950705
                                             EP 1994-910243
                                                                    19930910
     EP 660827
                          В1
                                 19970416
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
     JP 08503932
                          \mathbf{T}
                                 19960430
                                             JP 1993-507886
                                                                    19930910
                                             AT 1994-910243
     AT 151757
                          Τ
                                19970515
                                                                    19930910
     ES 2100706
                          Т3
                                             ES 1994-910243
                                19970616
                                                                    19930910
     US 5684011
                          Α
                                19971104
                                             US 1996-653099
                                                                    19960524
PRAI GB 1992-19635
                          Α
                                19920916
                               . 19930910
                          В1
     US 1993-119920
     WO 1993-GB1912
                                19930910
OS
     MARPAT 121:157663
AB
     Title compds. I (R1 = F2C=CHCH2CH2(0)nS, n = 0-2; R2, R3, R4 = H, alkyl,
     alkenyl, alkynyl, cycloalkyl, alkylcycloalkyl, (substituted) aryl,
     (substituted) arylalkyl, (substituted) aryloxy, (substituted) arylalkoxy,
     alkoxy, alkenylthio, halo, HO, NC, O2N, etc., adjacent pair of R2, R3 and
     R4 when taken together form a fused 5- or 6-membered carbocyclic or
    heterocyclic ring) having, acaricidal, fungicidal, insecticidal and
     nematocidal activities, are prepared K2CO3 2-mercaptopyrimidine, and
     2-(2-bromoethyl)-1,3-dioxolane were refluxed for 3.5 h to give
     2-[2-(1,3-dioxolan-2-yl)ethylthio]pyrimidine which in THF was treated with
     HCl at ambient temperature for 30 h to give 2-(3-oxopropylthio)pyrimidine; this
     and CBr2F2 in AcNMe2 was reacted with Ph3P to give I (R1 = R2 = R3 =
     5-H, 5-H and 6-H, resp., R4 = 2-F2C=CHCH2CH2S) (II). II at 500 ppm showed
     80-100% mortality against spider mite, green peach aphid, tobacco
     budworm-larva and banded cucumber beetle-larva.
IT.
     155956-99-3P 155957-00-9P 155957-01-0P
     155957-02-1P 155957-03-2P 155957-04-3P
     155957-05-4P 155957-06-5P 155957-07-6P
     155957-08-7P 155957-09-8P 155957-10-1P
     155957-11-2P 155957-12-3P 155957-13-4P
     155957-14-5P 155957-15-6P 155957-16-7P
     155957-17-8P 155957-18-9P 155957-19-0P
     155957-20-3P 155957-21-4P 155957-22-5P
     155957-23-6P 155957-24-7P 155957-25-8P
     155957-26-9P 155957-27-0P 155957-28-1P
     155957-29-2P 155957-30-5P 155957-31-6P
     155957-32-7P 155957-33-8P 155957-34-9P
```

155957-35-0P 155957-36-1P 155957-37-2P

155957-38-3P 155957-39-4P 155957-40-7P

155957-41-8P 155957-65-6P 155957-66-7P

155957-68-9P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of, as pesticide)

RN 155956-99-3 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} N \\ S - CH_2 - CH_2 - CH = CF_2 \end{array}$$

RN 155957-00-9 CAPLUS

CN Pyrimidine, 4-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{N} & \text{S-CH}_2\text{--CH}_2\text{--CH} = \text{CF}_2 \\ \end{array}$$

RN 155957-01-0 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-phenyl- (9CI) (CA INDEX NAME)

RN 155957-02-1 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(dimethoxymethyl)- (9CI) (CA INDEX NAME)

RN 155957-03-2 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-[3-(trifluoromethyl)phenyl]-(9CI) (CA INDEX NAME)

RN 155957-04-3 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-fluorophenyl)- (9CI) (CA INDEX NAME)

RN 155957-05-4 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

$$\texttt{F}_2\texttt{C} = \texttt{CH} - \texttt{CH}_2 - \texttt{CH}_2 - \texttt{S} \qquad \texttt{N} \qquad \qquad \texttt{NO}_2$$

RN 155957-06-5 CAPLUS

CN Pyrimidine, 4-cyclopropyl-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$S-CH_2-CH_2-CH=CF_2$$

RN 155957-07-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(1-methylcyclopropyl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & \\ & &$$

RN 155957-08-7 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(pentafluoroethyl)- (9CI) (CA INDEX NAME)

$$F_2C$$
 CH- CH_2 - CH_2 - S N CF_2 - CF_3

RN 155957-09-8 CAPLUS

CN 4,5-Pyrimidinediamine, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} N & S-CH_2-CH_2-CH \longrightarrow CF_2 \\ \hline H_2N & N \\ NH_2 & \end{array}$$

RN 155957-10-1 CAPLUS

CN Pyrimidine, 4-[(4,4-difluoro-3-butenyl)oxy]-2-[(4,4-difluoro-3-butenyl)thio]-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 155957-11-2 .CAPLUS

CN 4(1H)-Pyrimidinone, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl- (9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S$$
 HN
 Me

RN 155957-12-3 CAPLUS

CN 4(1H)-Pyrimidinone, 2-[(4,4-difluoro-3-butenyl)thio]-6-(trifluoromethyl)-(9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S \qquad \begin{matrix} H \\ N \end{matrix} CF_3,$$

RN 155957-13-4 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-ethoxy-6-phenyl- (9CI) (CA INDEX NAME)

RN 155957-14-5 CAPLUS

CN Pyrimidine, 4-[(4,4-difluoro-3-butenyl)thio]-2-(methylthio)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \operatorname{MeS} & \operatorname{N} & \operatorname{S-CH}_2 - \operatorname{CH}_2 - \operatorname{CH} \Longrightarrow \operatorname{CF}_2 \\ & \cdot & \cdot \\ & & \cdot & \end{array}$$

RN 155957-15-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-5-nitro- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} N & S-CH_2-CH_2-CH \longrightarrow CF_2 \\ \hline O_2N & N \end{array}$$

RN 155957-16-7 CAPLUS

CN Pyrimidine, 2,4-bis[(4,4-difluoro-3-butenyl)thio]-5-nitro- (9CI) (CA INDEX NAME)

RN 155957-17-8 CAPLUS

CN Quinazoline, 4-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 155957-18-9 CAPLUS

CN 4(1H)-Pyrimidinone, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$O \longrightarrow_{N}^{H} S-CH_{2}-CH_{2}-CH \Longrightarrow CF_{2}$$

RN 155957-19-0 CAPLUS

CN Pyrimidine, 4,6-bis[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$S-CH2-CH2-CH=CF2$$

$$S-CH2-CH2-CH=CF2$$

RN 155957-20-3 CAPLUS

CN Pyrimidine, 4-[(4,4-difluoro-3-butenyl)thio]-6-(2,2,2-trifluoroethoxy)-(9CI) (CA INDEX NAME)

$$S-CH_2-CH_2-CH=CF_2$$
 $O-CH_2-CF_3$

RN 155957-21-4 CAPLUS

CN Pyrimidine, 2,4-bis[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S - N S - CH_2 -$$

RN 155957-22-5 CAPLUS

CN Pyrimidine, 4-[(4,4-difluoro-3-butenyl)oxy]-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S - N - CH_2 - C$$

RN 155957-23-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2,2,2-trifluoroethoxy)-

(9CI) (CA INDEX NAME)

$$F_3C-CH_2-O$$
 N
 $S-CH_2-CH_2-CH=CF_2$

RN 155957-24-7 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-ethoxy- (9CI) (CA INDEX NAME)

RN 155957-25-8 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(1-methylethoxy)- (9CI) (CA INDEX NAME)

RN 155957-26-9 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)

RN 155957-27-0 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-methoxy-6-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 155957-28-1 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2-propenyloxy)- (9CI) (CA INDEX NAME)

$$H_2C$$
 $=$ CH $=$ CH_2 $=$

RN 155957-29-2 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-methoxy- (9CI) (CA INDEX NAME)

RN 155957-30-5 CAPLUS

CN Pyrimidine, 4-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$C1$$
 N $S-CH_2-CH_2-CH=CF_2$

RN 155957-31-6 CAPLUS

CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-phenoxy- (9CI) (CA INDEX NAME)

RN 155957-32-7 CAPLUS

CN 4-Pyrimidinecarbonitrile, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 155957-33-8 CAPLUS

CN 4-Pyrimidinecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 155957-34-9 CAPLUS

CN 4-Pyrimidinecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)

RN 155957-35-0 CAPLUS

CN 4(1H)-Pyrimidinone, 2-[(4,4-difluoro-3-butenyl)thio]-6-(methoxymethyl)(9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S$$
 H
 $CH_2 - OMe$
 O

RN 155957-36-1 CAPLUS

CN 5-Pyrimidinecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S$$
 N
 $C - OEt$
 Ph

RN 155957-37-2 CAPLUS

CN 5-Pyrimidinecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-phenyl-(9CI) (CA INDEX NAME)

RN 155957-38-3 CAPLUS

CN 4-Pyrimidinecarboxaldehyde, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CF INDEX NAME)

RN 155957-39-4 CAPLUS
CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-phenyl- (9CI) (CFINDEX NAME)

Ph
$$N$$
 S CH_2 CH_2 CH_2 CF_2

RN 155957-40-7 CAPLUS
CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-4-phenyl- (9CI) (CA INDEX NAME)

Ph
$$N$$
 $S-CH_2-CH_2-CH=CF_2$

RN 155957-41-8 CAPLUS
CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-4-(2,2,2-trifluoroethoxy)(9CI) (CA INDEX NAME)

$$F_3C-CH_2-O$$
 N
 $S-CH_2-CH_2-CH=CF_2$
 N

RN 155957-65-6 CAPLUS
CN Pyrimidine, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S$$
N
Me

RN 155957-66-7 CAPLUS CN 4-Pyrimidinecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$F_2C = CH - CH_2 - CH_2 - S N C - NH_2$$

RN 155957-68-9 CAPLUS

CN Methanone, [2-[(4,4-difluoro-3-butenyl)thio]-4-methyl-5-pyrimidinyl]phenyl-(9CI) (CA INDEX NAME)

$$\begin{array}{c} {\rm F_2C} {\longleftarrow} {\rm CH-CH_2-CH_2-S} \\ {\stackrel{\scriptstyle \cdot }{\cdot}} \\ {\stackrel{\scriptstyle \cdot }{$$

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L4
           ANSWER 8 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
           1993:80948 CAPLUS
ΑN
           118:80948
DN
           Preparation of 2-trifluorobutenylthio-4-trifluorobutenyloxy pyrimidines
TΙ
           and analogs as nematocides
IN
           Turnbull, Michael Drysdale
PA
           Imperial Chemical Industries PLC, UK
SO
           Eur. Pat. Appl., 13 pp.
           CODEN: EPXXDW
DT
           Patent
LA
           English
FAN.CNT 1
                                                     KIND
                                                                    DATE
                                                                                             APPLICATION NO.
           PATENT NO.
                                                                                              -----
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ΡI
           EP 506269
                                                       Α1
                                                                    19920930
                                                                                             EP 1992-302214
                                                                                                                                              19920313
                   R: PT
                                                                                             CA 1992-2083689
           CA 2083689
                                                       Α1
                                                                    19920929
                                                                                                                                              19920317
           WO 9217459
                                                      A1 · 19921015
                                                                                             WO 1992-GB473
                                                                                                                                              19920317
                   W: AU, BG, BR, CA, CS, HU, JP, KR, MW, RO, RU, US
                   RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN,
                            GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG
           AU 9215430
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                                                                    19921102
                                                                                             AU 1992-15430
                                                                                                                                              19920317
           HU 61878
                                                       Α2
                                                                    19930329
                                                                                             HU 1992-3576
                                                                                                                                              19920317
          EP 533869
                                                      A1
                                                                    19930331
                                                                                             EP 1992-906658
                                                                                                                                             19920317
                   R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
                                                      Α.
                                                                    19930831
          BR 92047.98
                                                                                             BR 1992-4798
                                                                                                                                              19920317
           JP 05509334
                                                       Т
                                                                    19931222
                                                                                             JP 1992-506391
                                                                                                                                              19920317
                                                                    19931214
                                                                                             US 1992-853467
           US 5270318
                                                       Α
                                                                                                                                              19920318
PRAI GB 1991-6604
                                                       Α
                                                                    19910328
                                                       Α
           GB 1991-6606
                                                                    19910328
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          WO 1992-GB473
                                                                    19920317
os
          MARPAT 118:80948
AB
           Title compds. [I; R = CH2CH2CF:CF2; R1, R2 = H, (cyclo)alkyl, halo,
           alkoxy, Ph, etc.; R1R2 = atoms to complete a ring; X = O, S; Y = H when n
           = 0; Y = 0 or S when n = 1] were prepared Thus, 2-thiouracil was condensed
           with BrCH2CH2CF: CF2 to give title compound II which gave 99% reduction of root
           knots on tomato plants in Meloidogyne incognita-infested soil when applied
           as a drench at 2.5 ppm.
IT
           145364-26-7P 145364-27-8P 145364-28-9P
           145364-29-0P 145364-30-3P 145364-31-4P
           145646-70-4P
           RL: SPN (Synthetic preparation); PREP (Preparation)
                 (preparation of, as nematocide)
RN
           145364-26-7 CAPLUS
           Pyrimidine, 4-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)oxy]-2-
CN
          butenyl)thio] - (9CI) (CA INDEX NAME)
     CF<sub>2</sub>
```

RN 145364-27-8 CAPLUS
CN Pyrimidine, 4-propyl-6-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145364-28-9 CAPLUS

CN Pyrimidine, 2,4-bis[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \mathtt{CF_2} \\ \parallel \\ \mathtt{F-C-CH_2-CH_2-S} \\ N \\ N \\ \end{array}$$

RN 145364-29-0 CAPLUS

CN Pyrimidine, 4-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)thio]-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ \text{N} \\ \text{O-CH}_2\text{-CH}_2\text{-C-F} \end{array}$$

RN 145364-30-3 CAPLUS

CN Quinazoline, 5,6,7,8-tetrahydro-4-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145364-31-4 CAPLUS

CN Quinazoline, 2,4-bis[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145646-70-4 CAPLUS

CN Pyrimidine, 4-(1-methylethyl)-6-[(3,4,4-trifluoro-3-butenyl)oxy]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ \text{N} \\ \end{array} \begin{array}{c} \text{Pr-i} \\ \text{CF2} \\ \parallel \\ \text{O-CH}_2\text{-CH}_2\text{-C-F} \end{array}$$

```
ANSWER 9 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
T.4
ΆN
     1993:59720 CAPLUS
DN
     118:59720
ΤI
     Preparation of 2-(3,4,4-trifluoro-3-buten-1-yl thio)pyrimidines and
     related compounds as nematocides '
ΙN
     Turnbull, Michael Drysdale; Finney, John
     Imperial Chemical Industries PLC, UK
PA
SO
     Eur. Pat. Appl., 20 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
FAN.CNT 1
                       KIND
     PATENT NO.
                                DATE
                                            APPLICATION NO.
                                                                   DATE
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PΙ
     EP 506270
                         A1
                                19920930
                                         EP 1992-302215
                                                                   19920313
        R: PT
                         A1
     CA 2082508
                                19920929
                                            CA 1992-2082508
                                                                   19920317
     WO 9217457
                         A1
                               19921015
                                            WO 1992-GB472
                                                                   19920317
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             GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG
     AU 9213748
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                                          AU 1992-13748
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                                           EP 1992-906748
     EP 533870
                         A1
                                19930331
                                                                   19920317
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                                         HU 1992-3578
     HU 62760
                         A2 19930628
                                                                   19920317
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     JP 05507726
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A
A
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                                            US 1992-853213
                                                                   19920318
PRAI GB 1991-6605
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                                19910328
                         Α
     GB 1991-6715
                                19910328
     WO 1992-GB472
                         Α
                                19920317
     MARPAT 118:59720
OS
     Title compds. [I; R1-R3 = H, (halo)alkyl, alkenyl, alkynyl, cycloalkyl,
AB
     alkylcycloalkyl, halo, (halo)alkoxy, alkoxyalkyl, alkylthio, cyano, NO2, amino, OH, acylamino; carboxy, (substituted) Ph, PhO, PhCH2, PhCH2O, etc.;
     R2R3 = atoms to form a 5- or 6-membered ring; n = 0-2], were prepared Thus,
     4-hydroxy-2-mercapto-6-trifluoromethylpyrimidine was refluxed with
     4-bromo-1,1,2-trifluorobut-1-ene and K2CO3 in acetone to give 70% I (R1 =
     CF3, R2 = H, R3 = OH, n = 0). I as 40 ppm soil drenches gave 66-100% root
     knot reduction on cucumber plants infested with Meloidogyne incognita.
     4871-72-1P
ΙT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for nematocide)
RN
     4871-72-1 CAPLUS
     Pyrimidine, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (7CI, 8CI, 9CI)
CN
     (CA INDEX NAME)
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IT 145320-68-9P 145320-69-0P 145320-70-3P 145320-71-4P 145320-72-5P 145320-73-6P 145320-74-7P 145320-75-8P 145320-76-9P

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH2-CH2-S} \\ \parallel \\ \text{N} \\ \parallel \\ \text{O} \end{array}$$

RN 145320-69-0 CAPLUS
CN Pyrimidine, 4-methoxy-2-[(3,4,4-trifluoro-3-butenyl)thio]-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 145320-70-3 CAPLUS
CN Pyrimidine, 4-phenyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF}_2 \\ \parallel \\ \text{Ph} \\ \downarrow \\ \text{N} \end{array} \text{S-CH}_2 - \text{CH}_2 - \text{C-F} \\ \vdots \\ \vdots \\ \vdots \\ \text{N} \end{array}$$

RN 145320-71-4 CAPLUS
CN 4(1H)-Pyrimidinone, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} CF_2 \\ N \\ N \end{array}$$

RN 145320-72-5 CAPLUS

CN Pyrimidine, 4-methoxy-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \text{MeO} \\ \text{N} \end{array} \\ \text{S-CH}_2 - \text{CH}_2 - \text{C-F} \\ \end{array}$$

RN 145320-73-6 CAPLUS

CN Pyrimidine, 4-methoxy-6-propyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \text{F-C-CH2-CH2-S} \\ \text{N} \end{array}$$
 Pr-n OMe

RN 145320-74-7 CAPLUS

CN Pyrimidine, 4-(pentyloxy)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145320-75-8 CAPLUS

CN Pyrimidine, 4-butoxy-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145320-76-9 CAPLUS

Pyrimidine, 4-(2-butenyloxy)-2-[(3,4,4-trifluoro-3-butenyl)thio]-, (E)-CN (9CI) (CA INDEX NAME)

Double bond geometry as shown.

RN 145320-77-0 CAPLUS

4(1H)-Pyrimidinone, 6-propyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) CN (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ \downarrow \\ \text{N} \\ \downarrow \\ \text{O} \end{array} \qquad \begin{array}{c} \text{Pr-r} \\ \text{N} \\ \text{O} \end{array}$$

RN

145320-78-1 CAPLUS
Pyrimidine, 2-[(3,4,4-trifluoro-3-butenyl)thio]-4-(trifluoromethyl)- (9CI) CN (CA INDEX NAME)

145320-79-2 CAPLUS RN

CN Pyrimidine, 4-(methylthio)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) INDEX NAME)

RN 145320-80-5 CAPLUS

CN Pyrimidine, 4-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145320-81-6 CAPLUS

• CN Pyrimidine, 4-chloro-6-propyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145320-82-7 CAPLUS

CN Pyrimidine, 4-(phenylmethoxy)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145320-83-8 CAPLUS

CN Acetic acid, [[2-[(3,4,4-trifluoro-3-butenyl)thio]-4-pyrimidinyl]oxy]-, methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & CF_2 \\ \parallel & \parallel \\ MeO-C-CH_2-O & N & S-CH_2-CH_2-C-F \\ \hline \end{array}$$

RN 145320-84-9 CAPLUS

CN Pyrimidine, 4-propyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ N \end{array} \qquad \begin{array}{c} \text{Pr-n} \\ \end{array}$$

RN 145320-85-0 CAPLUS

CN Acetic acid, [[2-[(3,4,4-trifluoro-3-butenyl)thio]-4-pyrimidinyl]oxy](9CI) (CA INDEX NAME)

RN 145320-86-1 CAPLUS

CN 4(1H)-Pyrimidinone, 6-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ \downarrow \\ \text{N} \\ \end{array} \begin{array}{c} \text{H} \\ \text{N} \\ \end{array} \begin{array}{c} \text{Pr-i} \\ \text{O} \end{array}$$

RN 145320-87-2 CAPLUS

CN Pyrimidine, 4-chloro-6-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ \end{array}$$

RN. 145320-88-3 CAPLUS

CN Propanoic acid, 3-[[2-[(3,4,4-trifluoro-3-butenyl)thio]-4-pyrimidinyl]oxy], methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ || \\ \text{MeO-C-CH}_2\text{-CH}_2\text{-O} \\ || \\ \text{N} \end{array} \\ \text{S-CH}_2\text{-CH}_2\text{-C-F}$$

RN 145320-89-4 CAPLUS

CN Pyrimidine, 4-methoxy-6-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH2-CH2-S} \\ \text{N} \end{array} \begin{array}{c} \text{Pr-i} \\ \text{OMe} \end{array}$$

RN 145320-90-7 CAPLUS

CN Pyrimidine, 4-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \\ \end{array} \\ \begin{array}{c} \text{N} \end{array} \begin{array}{c} \text{Pr-i} \\ \end{array}$$

RN 145320-91-8 CAPLUS

CN 4(1H)-Quinazolinone, 5,6,7,8-tetrahydro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & CF_2 \\ \parallel & \parallel \\ N & S-CH_2-CH_2-C-F \\ \hline & N & \\ O & \end{array}$$

RN

145320-92-9 CAPLUS Quinazoline, 5,6,7,8-tetrahydro-4-methoxy-2-[(3,4,4-trifluoro-3-CN butenyl)thio] - (9CI) (CA INDEX NAME)

RN

145320-93-0 CAPLUS Quinazoline, 4-chloro-5,6,7,8-tetrahydro-2-[(3,4,4-trifluoro-3-CN butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145320-94-1 CAPLUS

Pyrimidine, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) CN INDEX NAME)

145320-95-2 CAPLUS RN

Pyrimidine, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) CN INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \parallel \\ \text{F-C-CH}_2\text{-CH}_2\text{-CH}_2\text{-} \\ \parallel \\ \text{O} \\ \text{N} \end{array} \right) \stackrel{\text{Me}}{\longrightarrow}$$

RN 145320-96-3 CAPLUS

CN Pyrimidine, 4-(2-butenyloxy)-2-[(3,4,4-trifluoro-3-butenyl)thio]-, (Z)-(9CI) (CA INDEX NAME)

Double bond geometry as shown.

RN 145336-31-8 CAPLUS

CN Pyrimidine, 4-[(4-chlorophenyl)methoxy]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

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ANSWER 10 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
ΑN
     1993:38938 CAPLUS
     118:38938
DN
     Preparation of 4-(3,4,4-trifluoro-3-buten-1-ylthio)pyrimidines and related
ΤI
     compounds as nematocides
     Turnbull, Michael Drysdale
IN
     Imperial Chemical Industries PLC, UK
PA
SO
     Eur. Pat. Appl., 18 pp.
     CODEN: EPXXDW
DT
     Patent
LA
     English
FAN.CNT 1
                         KIND
                                DATE
                                            APPLICATION NO.
     PATENT NO.
     _________
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                                         EP 1992-302216 19920313
     EP 506271
                         A1
                                19920930
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                                         CA 1992-2083690
WO 1992-GB474
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     CA 2083690
                                19920929
                         A1
    WO 9217458
                                19921015
                                                                   19920317
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                                          AU 1992-13785
    AU 9213785
                         A
                                19921102
                                                                   19920317
                         A1
                                19930331
                                           EP 1992-906573
    EP 533868
                                                                   19920317
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                A2
                                         ни 1992-3577
                                                                   19920317
    HU 62759
                                19930628
     BR 9204823
                        Α
                                19930817
                                            BR 1992-4823
                                                                   19920317
                       Т
     JP 05507727
                                19931104
                                            JP 1992-506049
                                                                   19920317
                       . A
A
     US 5250536
                                19931005
                                            US 1992-853456
                                                                   19920318
PRAI GB 1991-6609
                                19910328
                       · A
     WO 1992-GB474
                                19920317
OS
     MARPAT 118:38938
AΒ
     Title compds. [I; R1-R3 = H, (halo)alkyl, (halo)alkoxy, alkenyl, alkynyl,
     (alkyl)cycloalkyl, halo, alkenyloxy, alkoxyalkyl, alkylthio, cyano, NO2,
     amino, OH, carboxy, (substituted) Ph, PhO, PhCH2, PhCH2O, etc.; R2R3 =
     atoms to form a 5-6 membered ring; n = 0-2] were prepared Thus,
     4-hydroxypyrimidine was refluxed with P2S5 in pyridine to give 36%
     4-mercaptopyrimidine. This was refluxed with 4-bromo-1,1,2-trifluorobut-1-
     ene and K2CO3 in acetone for 1.5 h to give 79% I (R1-R3 = H, n = 0). The
     latter as a 40-ppm soil drench gave 94% reduction in root knots in cucumbers
     infested with Meloidogyne incognita.
IT
     145024-51-7P 145024-52-8P 145024-53-9P
     145024-54-0P 145024-55-1P 145024-56-2P
     145024-57-3P 145024-58-4P 145024-59-5P
     145024-60-8P 145024-61-9P 145024-62-0P
     145024-63-1P 145024-64-2P 145024-65-3P
     145024-66-4P 145024-67-5P 145024-68-6P
     145024-69-7P 145024-70-0P 145024-71-1P
     145024-72-2P 145024-73-3P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as nematocide)
RN
     145024-51-7 CAPLUS
     Pyrimidine, 4-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)
CN
```

RN 145024-52-8 CAPLUS CN Pyrimidine, 4-[(3,4,4-trifluoro-3-butenyl)thio]-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 145024-53-9 CAPLUS

CN Pyrimidine, 4-methyl-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-54-0 CAPLUS

CN Pyrimidine, 4-methyl-2-(1-methylethyl)-6-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 145024-55-1 . CAPLUS

CN Pyrimidine, 4-[(3,4,4-trifluoro-3-butenyl)thio]-2,6-bis(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 145024-56-2 CAPLUS

CN Pyrimidine, 4-(methoxymethyl)-2-methyl-6-[(3,4,4-trifluoro-3-butenyl)thio]- . (9CI) (CA INDEX NAME)

RN 145024-57-3 CAPLUS

CN 5H-Cyclopentapyrimidine, 6,7-dihydro-2-methyl-4-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{N} \\ \text{CF}_2 \\ \text{F-C-CH}_2\text{-CH}_2\text{-S} \end{array}$$

RN 145024-58-4 CAPLUS

CN Pyrimidine, 4-methyl-2-(2-methylpropyl)-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-59-5 CAPLUS

CN Pyrimidine, 2-methyl-4-(1-methylethyl)-6-[(3,4,4-trifluoro-3-butenyl)thio]-(9CI) (CA INDEX NAME)

RN 145024-60-8 CAPLUS

CN Pyrimidine, 2,4-dimethyl-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-61-9 CAPLUS

CN Pyrimidine, 2-ethyl-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-62-0 CAPLUS

CN Pyrimidine, 4-(1-methylethyl)-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-63-1 CAPLUS

CN Pyrimidine, 4-methyl-2-(2-methylpropyl)-6-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{Me} & \text{N} & \text{Bu-i} \\ & \text{N} & \\ & \text{S-CH}_2\text{-CH}_2\text{-C-F} \\ & \text{H} & \\ & \text{O} & \text{CF}_2 \end{array}$$

RN 145024-64-2 CAPLUS

CN Pyrimidine, 4-(1-methylethyl)-6-[(3,4,4-trifluoro-3-butenyl)sulfinyl](9CI) (CA INDEX NAME)

RN 145024-65-3 CAPLUS

CN Quinazoline, 5,6,7,8-tetrahydro-4-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-66-4 CAPLUS

CN Pyrimidine, 2-(methylthio)-4-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \text{MeS} \\ \text{N} \end{array} \\ \text{S-CH2-CH2-C-F}$$

RN 145024-67-5 CAPLUS

CN Pyrimidine, 4-(methylthio)-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CF}_2 \\ \parallel \\ \text{N} \\ \text{S} \\ \text{SMe} \end{array}$$

RN 145024-68-6 CAPLUS
CN Pyrimidine, 4-butoxy-6-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

RN 145024-69-7 CAPLUS
CN Pyrimidine, 4-[(3,4,4-trifluoro-3-butenyl)thio]-6-(2,2,2-trifluoroethoxy)(9CI) (CA INDEX NAME)

RN 145024-70-0 CAPLUS
CN Pyrimidine, 4-butoxy-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-71-1 CAPLUS CN Quinazoline, 4-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-72-2 CAPLUS

CN 2(1H)-Quinazolinone, 4-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

RN 145024-73-3 CAPLUS

CN Pyrimidine, 4-methoxy-6-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1984:6853 CAPLUS

DN 100:6853

TI Fungicidal and insecticidal 2-[(haloalkenyl)thio]-4-(dialkoxyphosphinothioyloxy)-6-alkylpyrimidines

IN Edwards, Laroy H.

PA USA

SO U.S., 10 pp. CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 4402952	Α	19830906	US 1981-313547	19811022
DDAT	TTC 1001 212E47		10011000		

PRAI US 1981-313547 19811022 OS CASREACT 100:6853; MARPAT 100:6853

About 19 pyrimidines I (R, R1 = alkyl; R2 = H, alkyl, alkoxy; X, Y, Z = H, halo) were prepared from 2-mercapto-4-hydroxypyrimidines. Thus, refluxing 2-mercapto-4-hydroxy-6-methylpyrimidine with H2C:CClCH2Cl in EtOH in the presence of K2CO3 8 h gave II. II was refluxed with K2CO3 in acetone for 2 h, treated with (EtO)2P(S)Cl and further refluxed to give I (R = R1 = Et; R2 = Me; X = Cl; Y = Z = H) (III). III gave 98% control of bean powdery mildew and 99% control of aphids at 40 ppm.

IT 88037-16-5P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and fungicidal and insecticidal activity of)

RN 88037-16-5 CAPLUS

CN Phosphorothioic acid, O-[2-[(3,3-dichloro-2-propenyl)thio]-6-methyl-4-pyrimidinyl] O,O-diethyl ester (9CI) (CA INDEX NAME)

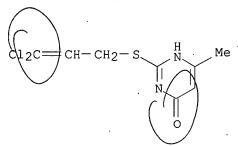
IT 88037-19-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction with dialkyl phosphorochloridothioate)

RN 88037-19-8 CAPLUS

CN 4(1H)-Pyrimidinone, 2-[(3,3-dichloro-2-propenyl)thio]-6-methyl- (9CI) (CA INDEX NAME)



- L4 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1982:85574 CAPLUS
- DN 96:85574
- TI 4-[(N,N-Dimethylcarbamoyl)oxy]-5-methylpyrimidines and their use in combating pests, and 4-hydroxy-5-methyl pyrimidines used as intermediates
- IN Gsell, Laurenz; Meyer, Willy
- PA Ciba-Geigy A.-G., Switz.
- SO Eur. Pat. Appl., 20 pp. CODEN: EPXXDW
- DT Patent
- LA German
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	EP 36839	A2	19810930	EP 1981-810098	19810316
	R: AT, BE, CH	, DE, FR	•		
	JP 56147775	A		JP 1981-41625	19810320
PRAI	CH 1980-2197	Α.	19800320		

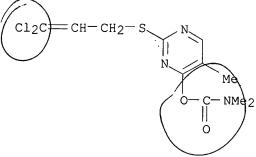
CH 1981-972 A 19810213

AB I [R = C1-4 alkyl, haloalkyl, cyanoalkyl, (C1-4-alkoxy)-C1-4-alkyl, (C1-4-alkylthio)-C1-4-alkyl, C2-5 alkenyl, alkynyl, or haloalkenyl; n = 0-2] were prepared and shown to have insecticidal activity. Thus, OHCCHEtCO2Me was cyclized with thiourea in EtOH containing K2CO3 to give III, which was methylated with MeI, then treated with Me2NCOCl to give III.

IT 80477-32-3P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and insecticidal activity of)

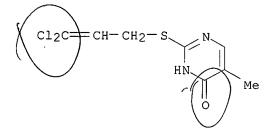
- RN 80477-32-3 CAPLUS
- CN Carbamic acid, dimethyl-, 2-[(3,3-dichloro-2-propenyl)thio]-5-methyl-4-pyrimidinyl ester (9CI) (CA INDEX NAME)



- IT 80477-26-5P
 - RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction with dimethylcarbamoyl chloride)

- RN 80477-26-5 CAPLUS
- CN 4(1H)-Pyrimidinone, 2-[(3,3-dichloro-2-propenyl)thio]-5-methyl- (9CI) (CF INDEX NAME)



10/524,438

L4 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN AN 1971:100080 CAPLUS.

DN 74:100080

TI 2-(Haloalkenylthio)-4,6-dimethylpyrimidines, useful for controlling the growth of undesirable vegetation

IN D'Amico, John J.

PA Monsanto Co.

SO U.S., 2 pp. CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 3557112	A	19710119	US 1969-803050	19690227
PRAI	US 1969-803050	A	19690227		

AB To a solution containing 44.2 g I (R = H).HCl, 80 g 25% NaOH, and 300 ml of H2O was added 31.2 g 1,3-dichloro-2-butene. The stirred mixture was heated 24 hr to give I (R = CH2CH:CClMe). Similarly prepared were: I (R given): CH2CBr:CH2, cis- and trans-CH2CCl:CHCl; CH2CH:CCl2, CH2CCl:CCl2. These compds. are very effective when used as preemergent herbicide.

IT 31406-46-9P 31406-47-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 31406-46-9 CAPLUS

CN Pyrimidine, 2-[(3,3-dichloroallyl)thio]-4,6-dimethyl- (8CI) (CA INDEX NAME)

RN 31406-47-0 CAPLUS

CN Pyrimidine, 4,6-dimethyl-2-[(2,3,3-trichloroallyl)thio]- (8CI) (CA INDEX NAME)

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ANSWER 14 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
1.4
ΑN
     1966:27611 CAPLUS
DN
     64:27611
OREF 64:5110f-g
TI
     2-(Trifluorobutenylthio)pyrimidines
ΙN
     Brokke, Mervin E.
PA
     Stauffer Chemical Co.
SO
     1 p.
DT
     Patent
T.A
     Unavailable
FAN.CNT 1
     PATENT NO. ·
                         KIND
                                 DATE
                                             APPLICATION NO.
                                                                DATE
                                 _____
     US 3223707
PI.
                                 19651214
                                             US 1963-332857
                                                                    19631223
PRAI US
                                 19631223
AΒ
     To a stirred suspension of 19 g. 4-bromo-1,1,2-trifluoro-1-butene and 14.9
     g. 2-meraptopyridine hydrochloride in 200 cc. MeOH was added 8 g. NaOH in
     50 cc. H2O. The mixture was stirred and refluxed for 2 hrs. to give
     2-(3,4,4-trifluorobuten-3-ylthio)pyrimidine, b0.8 80°. Similarly
     prepared were 4-methyl-2-(3,4,4-trifluorobuten-3-ylthio)pyrimidine, b0.1
     78°, and 4,6-dimethyl-2-(3,4,4-trifluorobuten-3-ylthio)pyrimidine,
     n20D 1.5032. The compds. were effective against root-knot nematodes.
     4871-71-0P, Pyrimidine, 2-[(3,4,4-trifluoro-3-butenyl)thio]-
ΙT
     4871-72-1P, Pyrimidine, 4-methyl-2-[(3,4,4-trifluoro-3-
     butenyl)thio] - 4871-73-2P, Pyrimidine, 4,6-dimethyl-2-[(3,4,4-
     trifluoro-3-butenyl)thio]-
     RL: PREP (Preparation)
        (preparation of)
RN
     4871-71-0 CAPLUS
CN
     Pyrimidine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (7CI, 8CI) (CA INDEX
     NAME)
```

$$\begin{array}{c} \text{CF}_2 \\ \parallel \\ \text{S-CH}_2\text{-CH}_2\text{-C-F} \end{array}$$

RN 4871-72-1 CAPLUS
CN Pyrimidine, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (7CI, 8CI, 9CI)
(CA INDEX NAME)

$$CF_2$$
 $F-C-CH_2-CH_2-S$
 N
 N

RN 4871-73-2 CAPLUS
CN Pyrimidine, 4,6-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (7CI, 8CI)
(CA INDEX NAME)

$$\begin{array}{c} \text{CF2} \\ \text{F-C-CH2-CH2-S} \\ \text{N} \\ \text{Me} \end{array}$$

10/524,438

=> log y COST IN U.Ş. DOLLARS	SINCE FILE ENTRY	TOTAL
FULL ESTIMATED COST	74.25	SESSION 247.46
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-10.92	-10.92

STN INTERNATIONAL LOGOFF AT 23:00:03 ON 31 JUL 2007